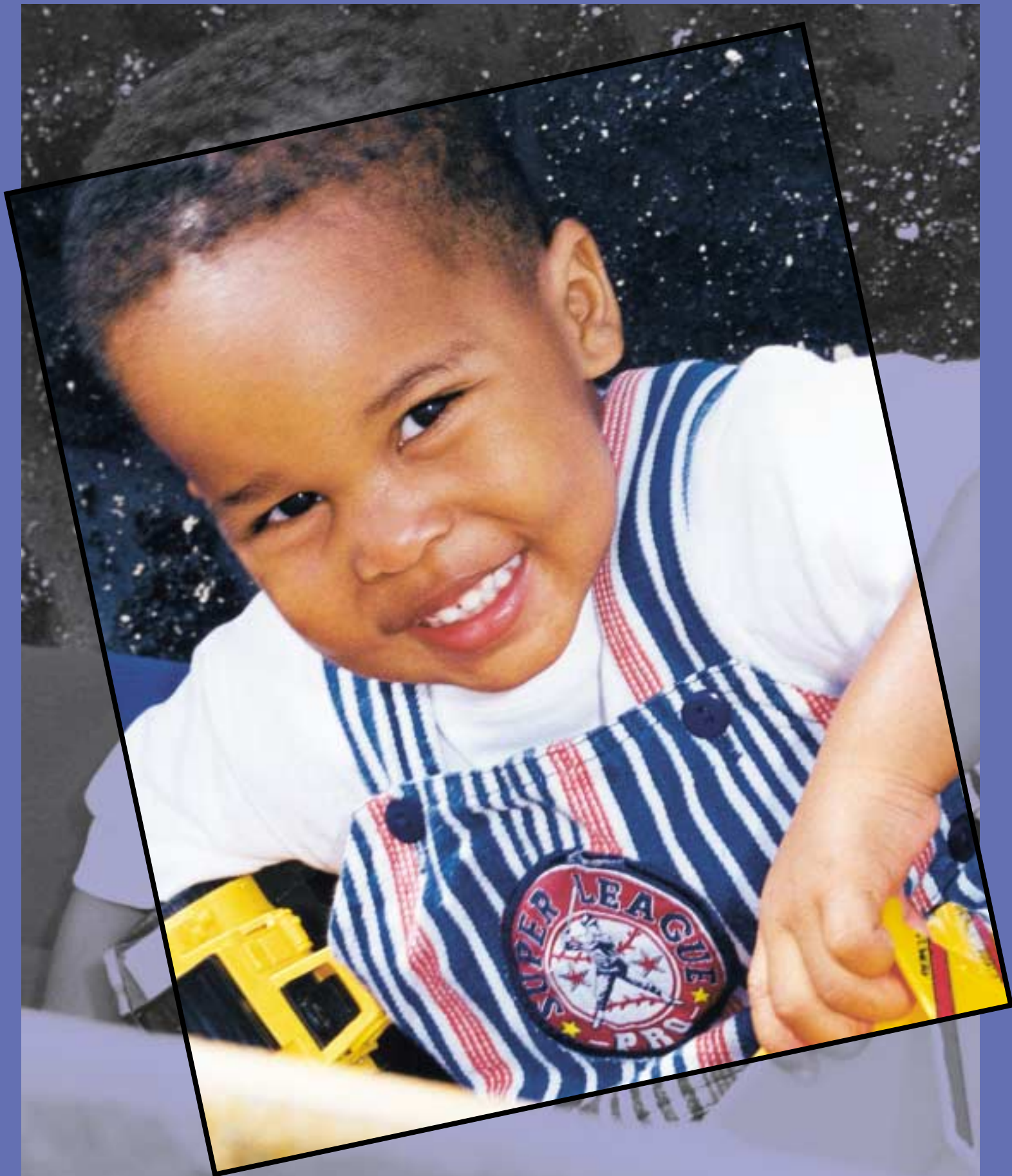


# Missouri

Department of  
Transportation  
2000 Annual Report





Photograph by Cathy Morrison

# From the Director

## Gearing Up for Our Drivers Down the Road



The Missouri Department of Transportation provides the best possible transportation system for Missourians with the funds and other resources available.

MoDOT builds and maintains highways and bridges, and helps develop aviation, rail, transit, waterways, and pedestrian and bicycle facilities. We're also about people. MoDOT works to provide safe and convenient travel for Missouri motorists today and for our children, the drivers of tomorrow. We want Missourians to see in this 2000 Annual Report what we do and what is possible.

Our goal is to improve travel for Missourians according to what they want, which is why we've involved many citizens from around the state in long-range planning this year. We know individuals like to set their own course as much as possible. That's part of the Show Me attitude – give me the facts and let me make up my own mind.

We gave people the facts and heard their comments in public meetings, in focus groups and through telephone surveys this year. Travelers told us what they liked or didn't like about highways and other forms of transportation. The results of this work will be used to set the general direction of improvements, including the ways in which priorities and schedules are determined in the five-year construction program.

Missourians seem generally pleased with what MoDOT's doing but want more service and want it faster. At the same time, Missourians overwhelmingly say MoDOT needs to take better care of the system we have. Taking care of a \$60 billion asset, some of which dates back to the early 20th century, requires a lot of investment.

MoDOT is working to improve transportation through better planning, better maintenance, rehabilitation and reconstruction, and by reminding travelers of the need for greater investment. We are striving to provide the system Missouri needs in a first-class manner, but cost-effectively. However, if resources don't grow to match the need, then cost constraints will restrict Missouri's progress.

We know motorists are interested in more than just pavements and bridges. Roadsides must be mowed and litter-free. Rest areas must be clean and convenient. Road markings, signs and signals must be useful and easy to see. MoDOT people must be courteous and helpful. Work zones must be arranged and marked effectively.

People are investing in us and counting on us to provide a better transportation system, and we're determined to show it can be done. We're working toward this goal with everyone's help — for us and for all of our children.

A handwritten signature in black ink, appearing to read "J. Angerhofer", written in a cursive style.

**On the cover:** Intermediate Structural Steel Painter Mildred Anthony directs traffic while the rest of a MoDOT bridge maintenance crew rehabilitates a bridge in northeast Missouri. Photograph by Cathy Morrison.

**This page:** Photograph by Cathy Morrison.

**On the back cover:** (left to right) Senior Structural Steel Painter Kenny Bland, Bridge Blasting Supervisor Jack Klocke, Intermediate Structural Steel Painter Mildred Anthony, Seasonal Structural Steel Painter Demond Johnson and (front) Seasonal Structural Steel Painter Mark Aldridge. Members of this crew are also shown on the front cover and page 12. Photograph by Cathy Morrison.



# Show Me Progress



Our purpose is making travel better. We work every day on a system of more than 32,000 miles of roadway that is a \$60 billion asset for Missourians.

MoDOT rehabilitates and improves roads and bridges already in place and builds new ones to make travel safer, smoother and more efficient.

We are committed to providing even more improvements through projects accelerated by bond financing.

This section shows you progress in planning, building and maintaining a quality highway system in each region in Missouri. The projects listed on the following pages were under construction between July 1, 1999, and June 30, 2000. This list is not inclusive of all projects under construction by MoDOT.

## North

**Frederick Boulevard** - This major thoroughfare in St. Joseph is being widened to four lanes from Interstate 29 east to Riverside Road.

**Interstate 35** - A test section of Interstate 35 in Harrison County had deteriorated and was quickly replaced.

**Route 36** - Route 36 is being widened from two to four lanes for seven miles from Caldwell County to west of Utica.

**Route 61** - The final section of four-lane highway between Bowling Green and New London was completed.

**Route 63** - The highway is being widened to four lanes from north of Route EE south to Renick and from south of Renick to Route F in Boone County.

**Route 65** - Both lanes of Route 65 are being resurfaced from I-70 to the Pettis County line, including the I-70 and Route 65 intersection.

**Interstate 70** - A 14.5-mile section is being resurfaced from the Lafayette/Saline County line to Blackwater.

**Route 71** - The highway is being widened from two to four lanes from Nodaway County to north of Route 48.

**Interstate 72, Mississippi River**

**Bridge** - The new Mark Twain Memorial Bridge, a four-lane interstate span, is being built to replace the existing two-lane structure. This major link between West-Central Illinois and Northeast Missouri opened in September 2000.

**Route 79** - Major resurfacing was done on 37 miles of Route 79 beginning at Route E in Ralls County and extending the entire length of Pike County.

**Route 136** - Three narrow bridges are being replaced along this route. They are near Memphis, Arbela and Luray.

## Kansas City

**Bruce R. Watkins Drive** - The final segment of a new four-lane divided highway from 31st Street to the downtown loop is under construction. When it is finished, it will complete a new Route 71 from downtown to the Grandview Triangle interchange at interstates 470 and 435.

**Grandview Triangle** - A third lane was extended from eastbound Interstate 435 into the interchange, and emergency location signs were added throughout the Triangle.

**Route 7** - The highway is being widened and three new bridges are being built in Pleasant Hill. Four lanes are being reconstructed from Blue Springs to just north of Colbern Road.

**Route 13** - A new bridge is being built over the Missouri River at Lexington. Route 13 is being widened to four lanes and repaved from south of Clinton to St. Clair County, including a new bridge over the Truman Reservoir.

**Route 50** - The Todd George Road Bridge over Route 50 in Lee's Summit is under construction.

**Route 71** - Pavement is being reconstructed from Route 7 to south of Route 2 near Harrisonville.

**Route 150** - An underpass at the Kansas City Southern Railway crossing is under construction. A new four-lane bypass of Martin City from the Kansas state line to Route D is being built.

**Route 169** - This highway is being widened from two to four lanes from north of Interstate 435 to Smithville.

**Route 210** - A new two-lane road is being built from east of Missouri City to west of Missouri City, including a new bridge.

**Route 291** - Route 291 is being widened from two to four lanes. The project includes a Missouri River bridge between Route 24 in Jackson County and Route 210 in Clay County.

**Route 291** - The four-lane divided highway is being reconstructed from Route 50 to south of Route 150 in southern Jackson County and northern Cass County.



Photograph by Gary Reinhart





Gary Bass works cooperatively with local communities on traffic, safety and access management issues. A transportation project designer in MoDOT's Springfield/Branson district, Bass gets difficult jobs done quickly.

In one of the fastest-growing areas of the state, he brings people together and combines resources creatively. Bass includes residents, business owners, developers and contractors in transportation discussions. They combine ideas and locate the money needed.

"We try to find the best possible solutions for everyone," Bass says. "When each person understands the problems and we find the solution together, it's easier for us all to agree on the details of a project. All of the groups involved share in the benefits, and that makes everyone a winner."

Bass works with city and county planning and zoning commissions development occurs. He is known in communities as a person who is fair, honest and a pleasure to work with.

Bass leads a small team of specialized designers to react quickly to transportation design needs. Often, transportation system design is a long and arduous process. However, Bass' team works closely together and produces remarkable results due to his leadership abilities and his desire to help team members do their best.

"MoDOT works with city and county leaders, developers and others to improve today's roads and plan for tomorrow's," Bass says. "It takes all of us to know what's coming so we can plan for the future."

## Employee Profile

### Central

**Route B** - Route B in Boone County is being widened to five lanes from Route 63 to Business Loop 70.

**Route 5** - A new Route 5 Niangua Bridge is being constructed in Camden County.

**Route 50/63** - The intersection at Route 50 and Route 63 in Osage County is being replaced with an interchange.

**Route 54** - Two new lanes of a four-lane divided highway are being added along with the Route Y interchange between Linn Creek and Osage Beach.

**Route 63** - Route 63 in Boone County is being widened to four lanes for 7.6 miles from south of Route 22 to south of the Route 124 north junction.

**Route 65** - Four new lanes are being built from the Pettis/Benton County line to 1.5 miles south of Route 52.

**Interstate 70** - The westbound lanes of Interstate 70 are being resurfaced from the Saline/Cooper County line to just east of Route K. The eastbound lanes are being

resurfaced from Route 740 to Route 63 in Columbia.

**Route 179** - This highway in Cole County is being extended to link Route 50, Edgewood Drive, Route C, Route 54 and Route B.



Photograph by Ursie Mengwasser

## St. Louis

**Page Avenue** - Page Avenue is being extended for 20 miles to connect Interstate 270 in St. Louis County to Route 40/61 in St. Charles County. This project includes a Missouri River bridge and a bridge over Creve Coeur Lake.

### **Manchester Road/Interstate 270**

**Interchange** - This interchange is being improved by eliminating traffic signals. The project includes a bridge over Interstate 270.

**Route 21** - Route 21 is being relocated and improved to four lanes with limited access from Schenk Road to DeSoto.

**Interstate 70 Bridge Rehabilitation** - More than 20 bridges are being replaced along the I-70 corridor in St. Louis and St. Louis County.

**Route 141** - Route 141 is being relocated and improved from south of Clayton Road to Vance Road. The new road will be a six-lane highway with limited access.

## South

### **Bill Emerson Memorial Bridge**

Construction is under way on the main span of the new Bill Emerson Memorial Bridge across the Mississippi River at Cape Girardeau.

**Route 13** - The highway is being widened from two to four lanes from St. Clair County to two miles south of routes A and C at Lowry City.

**Route 13** - Two additional lanes are being added to Route 13 north of Springfield. Construction has begun on a relocation at Reed Springs.

**Route 19** - Route 19 is being realigned from about two miles south of Cuba to the Route 8 junction in Steelville. Improvements include construction of a bridge over the Meramec River as well as new pavement.

**Route 21** - Route 21 over the Little Black River in Ripley County is being relocated from the junction of Route NN to one mile south of Route NN, including replacement of a bridge. Turn lanes and traffic signals are being installed at the junction of Route 21 and Route E.

**Route 32** - Route 32 is being widened from two to five lanes from Route 19 to Salem.

**Interstate 44** - Major sections of the interstate in southwest Missouri are being rebuilt or resurfaced, and bridges are being rehabilitated.

**Route 60** - The roadway is being reconstructed with a new, long-lasting concrete driving surface near Mansfield.

**Route 60** - The four-lane highway is being extended east from the Business Route 63 west junction to east of Route 137. Improvements include construction of bridges, as well as an interchange at routes 137

and 76. Eleven miles of Route 60 between the junctions of Route 21 North and Route 21 South are being relocated and expanded to a four-lane divided highway. A pedestrian walkway is being constructed on the Current River Bridge at Van Buren.

**Route 63** - Route 63 is being widened from two to four lanes from Route P to south of Willow Springs.

**Route 65** - A new interchange on Route 65 north of Springfield at Fair Grove is under construction. A new interchange is also being built at routes 65 and D (Sunshine Street) in Springfield. Route 65 is being widened south of Springfield to four lanes between Ozark and Branson.

**Route 67/Route 32 Interchange** - A new southbound access ramp is being constructed at the Route 67/Route 32 interchange in Farmington.

**Route 67** - A portion of Route 67 near Mill Creek in Madison County is being relocated, and a new interchange is being constructed at Route E.

**Route 160** - A four-lane bypass is being built on Springfield's west side to connect the James River Freeway with I-44 to the north. Working with the Burlington Northern Railroad, MoDOT will change several railway bridges and eventually widen the road to five lanes.

## Missourians Satisfied, But Want More Improvements

Missouri motorists are generally satisfied with transportation in Missouri but want more improvements, according to a comprehensive customer survey conducted for the department by the University of Missouri-Columbia.

"The results show us what our customers think is important, what we're doing well and where we need to improve," says MoDOT Director Henry Hungerbeeler.

The survey included approximately 1,600 phone calls to randomly selected Missourians. They were asked 41 questions covering all aspects of Missouri transportation, including road conditions and markings, availability of a variety of transportation options, highway construction and maintenance, safety improvements, and customer service.

The results show people are pleased with the majority of services MoDOT offers. Of 41 items, 29 were identified as "strengths" and 12 as "challenges." Several of the strongest areas of concern are related to pavement conditions.

"It's gratifying to hear we're doing well in most areas," says Hungerbeeler, "But at the same time there are some critical areas we must devote more resources to. This report will be instrumental to us in planning for project construction and maintenance, as well as other operations."

The survey — by far the most extensive and detailed transportation survey ever undertaken by MoDOT — asked Missourians whether more money should be spent on new construction or on reconstruction and rehabilitation of existing highways. The results show people would like to see 60 percent of funds used on taking care of existing highways, and 40 percent for building new highways.

"This finding is significant to us, and confirms that MoDOT is heading in the right direction," Hungerbeeler says. "We've recently started putting more emphasis on rehabilitation and reconstruction in our project planning. These survey findings, along with other recent public input efforts, will play a large part in refining our strategic and long-range plans. Our department's efforts will be guided by what our customers expect from us, and we'll keep asking them what they want on a regular basis."

**Route 71** - Route 71 is being relocated and improved to four lanes from Route 60 to existing Route 71 south of Goodman and from south of Goodman to Route 76 near Anderson.

**Route 177** - Route 177 near Fruitland is being improved to facilitate traffic flow between Interstate 55 and the Procter and Gamble plant.

**Route 249 (Range Line Bypass)** - The first two sections of the bypass from I-44 to 7th St. in Joplin are complete. The rest of the project to Business Route 71 in Carterville is under construction.

**Route 412** - Route 412 is being improved between Hayti and Kennett with roadway grading and relocation.

**Route 465 (Ozark Mountain Highroad)** - A scenic four-lane highway is being built as a distributor route near Branson and Table Rock Lake.

Progers

Survey Says



# Terry Stowell



Photograph by Steve Porter

In fairy tales, we learn to be wary of the trolls hidden beneath bridges. Terry Stowell, a bridge inspector for Kansas City, looks for real problems hidden under bridges. In fact, he protects those who cross his bridges.

Stowell has been with MoDOT 21 years. He began on a bridge mainte-

nance crew, and after a stint with a striping crew and with Motorist Assist, Stowell became one of the first permanent inspectors in the Non-System Bridge Inspection Program. He inspects 1,550 city and county bridges every two years in eight counties in the Kansas City area.

"I look for deterioration of the bridge structure, rate it according to state and federal guidelines, estimate the cost to repair or replace the bridge and provide that information to the city or county," Stowell says.

MoDOT initiated the program because many cities and counties have neither the on-staff expertise nor funds to afford consultants who can meet federal bridge-inspection guidelines. Although Stowell and his counterparts throughout the state are employed by MoDOT, 80 percent of

their salaries and equipment is paid for by the cities and counties they aid.

"My customers are the residents, city councils and county commissions who want to ensure their bridges are safe," he says. "I'm responsible for some bridges built in 1859 that are still open to traffic. You have to know about the materials and designs used back then to determine whether the bridge is still structurally sound."

Last year, Stowell was inspecting a Cass County bridge when a cement truck crossed. As the truck passed, a shiver ran down his back as the footing for the intermediate support sagged into the creek bed. Stowell closed the bridge immediately.

"Sometimes it's a hardship to close a bridge, but it can prevent a catastrophe."

## Employee Profile



Photograph by Mike Wright

### The MoDOT Show Me Progress Sign

MoDOT's slogan for highway and bridge construction is Show Me Progress. The slogan will appear on distinctive signs on construction projects to let people know what they're receiving for their investment in Missouri's transportation system.

A project description and completion date on the signs tells motorists what to expect from each project. The department's toll-free customer service number is also provided.

Motorists will begin seeing Show Me Progress signs all over the state later in 2000. For more information on MoDOT's Show Me Progress Program, please visit MoDOT's web site at [www.modot.state.mo.us](http://www.modot.state.mo.us).

# Sharing a Vision for Transportation



Photograph by Cathy Morrison

20 years into the future. MoDOT will invest resources wisely and communicate with Missourians while planning improvements for all types of transportation:

- aviation
- bicycle and pedestrian accommodations
- highways and bridges
- passenger rail and bus service between cities
- public transportation
- waterway systems

MoDOT uses extensive engineering data and public input to identify priorities. MoDOT combines responsible engineering judgment and the needs of transportation users to define an acceptable transportation system.

The public commented this year on the transportation system in three ways. MoDOT began with Road Rallies conducted in four regions of the state. By taking drivers onto roadways, MoDOT gathered valuable information about acceptable levels of service for the state highway system.

What will Missouri's transportation system look like in 20 years? Our cars may not hover like spacecraft and we may not be "beamed" from one place to another, but it is clear that travel will continue to evolve.

MoDOT is planning for the future by partnering with Missourians to develop statewide guidelines for transportation improvements. The Long-Range Transportation Plan will provide direction and focus for transportation at least



# Employee Profile

## Vickie Ray and Tammy Wallace

Road Rallies were followed up with a random, statistically valid survey of about 2,200 people. Results of the survey helped determine Missouri's top transportation priorities for different types of transportation.

Public involvement continued with consensus-building sessions in five cities. Using information gathered during the survey, civic leaders and members of the public helped MoDOT develop long-range transportation strategies.

Public involvement encouraged Missourians to share their vision for the future of transportation. This vision, combined with MoDOT expertise, was used to develop a draft LRTP, which will be studied and revised before a final version of the plan is completed later in 2000.

By working together, MoDOT and the people of Missouri will develop a safer, more efficient transportation system that offers a variety of travel options.

Missourians gained a central source of information and help when MoDOT became the first state agency to offer customer service centers in 1996. People can have problems addressed and provide comments about Missouri's transportation system. In every region of Missouri, customer service representatives provide prompt and friendly service to customers.

Vickie Ray (pictured above) and Tammy Wallace (pictured below), have earned a reputation for going the extra mile to make sure that customers' needs are met in MoDOT's North Central District headquartered at Macon. With more than 22 years of combined experience at MoDOT, Ray and Wallace can provide answers to most callers' questions. If not, they connect a customer to the appropriate person to get the concern taken care of quickly.

"It is important to us that we get a customer's question answered or problem resolved as soon as possible," says Ray.

"People need to know their concerns are being addressed and that they will soon be resolved," Wallace added. "It is extremely satisfying to work directly with customers and to provide them with the help they need in a timely manner."



Photographs by Mike Wright





# Funding

## Bond Financing

A new law approved in 2000 authorized MoDOT to use bond financing to accelerate highway and bridge improvements. The Missouri Highways and Transportation Commission can issue bonds for up to \$2.25 billion to finance highway construction through 2006. The first \$250 million in bond financing accelerated projects in fiscal year 2001.

Bond funding allows MoDOT to use money for projects now and pay it back as a loan over time. This type of financing is an excellent way to speed up some needed improvements in Missouri's transportation system. Revenue from bonds will be combined with other MoDOT revenue to accomplish more than \$1

billion in highway and bridge improvements in the year 2001.

The first \$250 million will be used to accelerate 58 projects from a few months to as much as three years, depending on the current status of planning and design. This money means MoDOT can build safer, smoother, longer-lasting highways and bridges sooner and save on the inflation costs of doing the projects in the future.

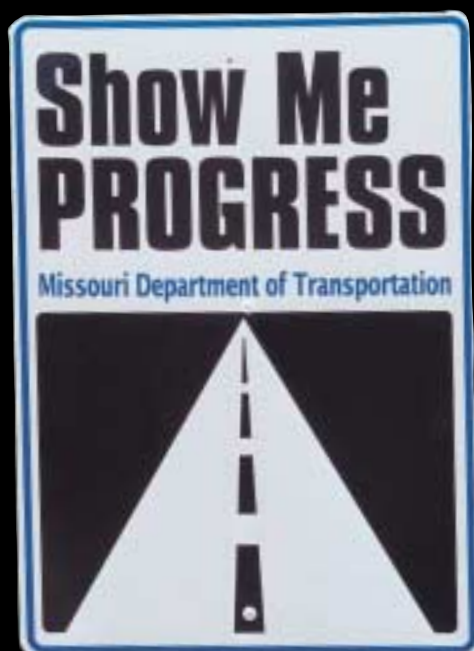
However, because bond money must be paid back, it is not a solution to funding shortfalls. Ultimately, an increase in funding is necessary to complete all needed transportation improvements.

(left to right) Pastor B.T. Rice, Speaker of the House Steve Gaw, Senator Danny Staples and Representative Dan Koller witness Gov. Mel Carnahan (front) signing the bill giving MoDOT the authority to use \$2.25 billion in bond financing to accelerate highway and bridge improvements.



Photograph by Cathy Morrison

## Moving forward with bond financing



- The law requires that the first \$250 million of the total \$2.25 billion in bond financing be used to accelerate projects already in MoDOT's Five-Year Program.
- The first \$250 million in projects accelerated by the Missouri Highways and Transportation Commission through bond financing were those capable of being started earlier because pre-construction details were complete or nearly complete.
- Primary factors in considering projects for acceleration were whether design work was complete, environmental permits had been obtained and right of way had been purchased.
- Work on some of the accelerated projects was scheduled to begin in the fall of 2000.
- A total transportation report will be submitted to the state Legislature in January 2001 and will include a comparison of what can be done with existing resources for transportation and further improvements that could be accomplished with increased revenue.
- Because bond-financing money must be paid back, it is not a solution to funding needs. Ultimately, an increase in funding is necessary to complete all needed transportation improvements.



## MoDOT Funding Facts

- Travel in Missouri has increased eight times faster than the population growth in the last 20 years. Missouri investment in highways in that same period has fallen 32 percent on an inflation-adjusted basis.
- Missouri ranks 45th in the nation in revenue per mile, yet we have the seventh-largest highway system in the country.
- Six of eight surrounding states have higher fuel taxes than Missouri, but Missouri relies more on fuel tax than most states do.
- Missouri has the second-highest median household income among states in this region, but Missouri investment per highway mile is the lowest.
- In 1999, personal income in Missouri grew at more than twice the rate of inflation, but MoDOT's state revenue barely kept pace with inflation.
- According to a recent American Automobile Association survey, it costs the average motorist 50 cents a mile to drive a car. MoDOT receives less than a penny of that 50 cents.

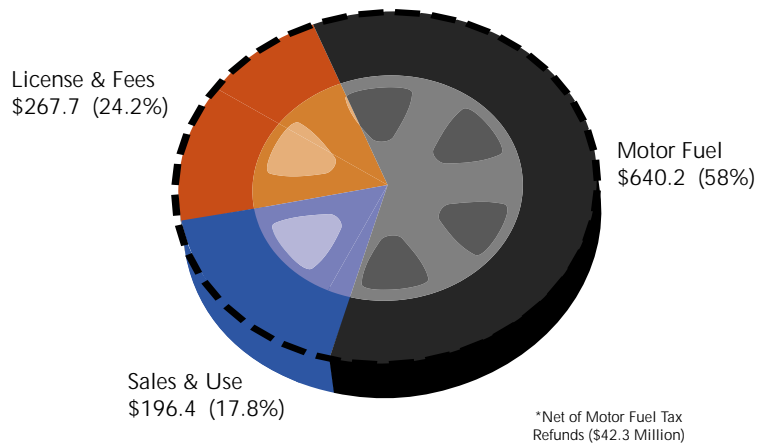
Photograph by Cathy Morrison





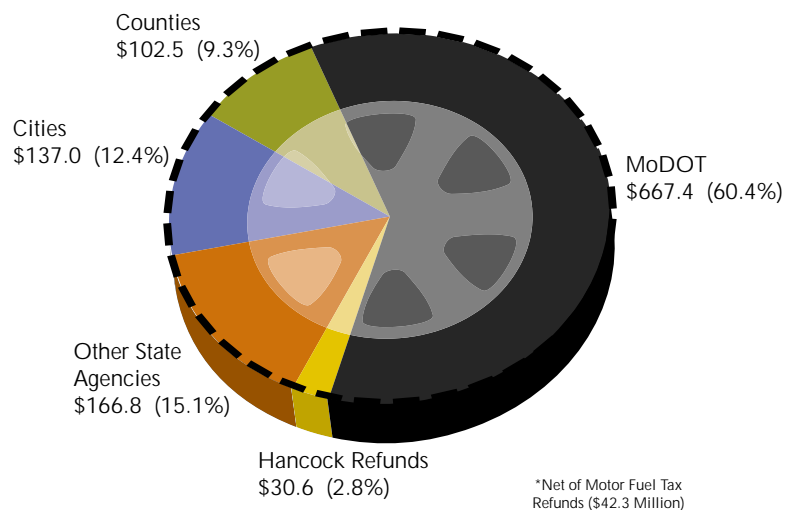
MoDOT's funding is collected from a motor fuel tax, a sales and use tax and from vehicle licenses and fees. However, not all of this money is available to MoDOT. Much of it is redistributed to counties, cities, other state agencies and through Hancock refunds to Missourians. MoDOT receives only about 60 percent of the user fees collected for roads and bridges. Approximately 9 percent goes to counties, 12 percent to cities, 15 percent to other state agencies and nearly 3 percent to Hancock refunds.

**Total State User Fees Collected \***  
**For Roads and Bridges**  
(Millions of dollars)



**FY 99 Total \$1,104,300,000**

**Total State User Fees Distributed\***  
**For Roads and Bridges**  
(Millions of dollars)



**FY 99 Total \$1,104,300,000**

# Taking Care of What We Have



Photograph by Cathy Morrison

Missouri has the nation's seventh-largest state highway system, which is more than 32,000 miles long. That's great news for Missourians and visitors who travel frequently, but that also means MoDOT has a huge job.

Many highways and bridges are wearing out. Travel has increased eight times faster than population growth over the past 20 years, meaning roads and bridges carry more traffic, which wears them out faster.

Missouri's interstate highways are especially strained. More than 1,100 miles of interstate in Missouri was built 30 to 40 years ago. They were built for a 20-year lifespan. Traffic has increased tremendously on these busy highways, and they're wearing out faster than we can repair them.

Missouri must devote more resources to taking care of this \$60 billion asset. It doesn't make sense to spend more on new highways, while what we have crumbles.

The public agrees. In a recent statewide customer survey, people told us if they could decide how to split up Missouri's highway dollars, they'd spend 60 percent of it to rehabilitate and reconstruct our existing roads and bridges, and 40 percent to build new highways.

We're devoting more money to reconstruction and rehabilitation of our highway and bridge system. We increased this amount from \$160 million to \$240 million last year, and we expect to invest more in the future.

MoDOT is increasing emphasis on preventive maintenance. We're looking at new methods and materials to help roads last longer. It will mean more investment up front, but fewer repairs and motorist delays in the future.

New technologies, such as Intelligent Transportation Systems in high-traffic areas, will help manage increasing traffic volumes without adding new driving lanes.

There are about 367,000 acres of land along our state highways. That's Missouri's front yard. We must keep it neat and clean, so travelers enjoy their drive.

At our interstate rest areas we've installed new equipment, renovated our existing facilities and expanded our use of work crews to make sure rest areas are cleaner, safer and more inviting.

## Jacky Traw



Photograph by Cathy Morrison

Jacky Traw helps keep MoDOT running in south central Missouri. The 13-year department veteran has been a shop mechanic at the district office in Willow Springs since 1995. He helps maintain and repair the district's large equipment and trains other MoDOT employees to work on equipment.

"I really like the fact that I can serve the public by taking good care of the state's equipment," Traw says. "I keep it in good repair so that it can be used safely and adequately by our crews to maintain our public roadways."

In addition to his regular duties, Traw serves on the statewide Field and Shop Mechanics Quality Circle. He also trains district employees to use a specialized snow-removal tool and a system for managing the district's fleet of vehicles and equipment. He also led a team that created and implemented a plan to use mechanics and equipment to better serve the 13-county region.

Traw adds, "It is very rewarding to see equipment you have worked on being used to make the highways better and safer for the public to use."

# Employee Profile



# Employee Profile

For Rolla Area Maintenance Superintendent Denzil Hills (pictured below on right), serving the needs of Missouri's traveling public is more than a responsibility - it's a source of satisfaction.

"I take a great deal of pride in my work - making the area as safe as possible for motorists, meeting with the public to hear concerns, and helping out with problems when we can," says Hills, who has worked for MoDOT for 31 years.

"I really like my job because I get to meet and deal with so many different people, both the public and our employees. There is a different challenge to deal with every day."

Hills oversees maintenance operations in the Rolla area. In addition to managing maintenance crews and their activities, he manages budgets, handles permit requests and other administrative duties.

"I have seen so many changes through the years," Hills says. "In snow removal, we have gone from spreading cinders by hand to using the computerized automatic spreaders we have today."

"I have worked for good supervisors and I have great employees under me," he says. "We have a lot of good people in MoDOT all working hard to do good things."

Denzil Hills



Photograph by Cathy Morrison

## Adopt-A-Highway

MoDOT's Adopt-A-Highway (AAH) sign designating adopted routes has been improved to better recognize adopters. AAH is a public/private partnership of MoDOT and volunteers to clean and beautify a section of roadway.

"The sign is just one part of a wonderful program we wholeheartedly support," says Henry Hungerbeeler, MoDOT director. "The AAH program is a great way for the public and MoDOT to work together to clean roadsides and help make our state a more beautiful and clean place to live."

The new signs help better recognize volunteers like the Viva Cuba group, the first volunteers to join the Missouri AAH program in 1987, and 81-year-old Owens Kollar, who adopted a section of Route J in Schuyler County for litter pickup.

The Viva Cuba volunteers still take care of a section of Route 19 in Cuba. The group actually does more work than they're required to by picking up litter, mowing and landscaping.

Kollar adopted his 6.3-roadway miles, more than three times the required length of a rural adopted section, for exercise following a heart attack. Today he and his wife, Mildred, continue to clean up litter on this stretch of highway near their home.

The new sign has a distinctive shape to give the sign instant recognition, and the larger lettering more prominently recognizes adopters. The bright blue and yellow colors are eye-catching and feature the lanceleaf coreopsis, a native Missouri wildflower.

The Viva Cuba volunteers, Kollar and more than 4,600 individuals and organizations contribute time and effort that's worth about \$2 million a year in litter pickup, mowing and beautification on 6,700 miles of roadsides.



Photograph by Cathy Morrison



## Highway project

### uncovers 6,000-year-old village

The remains of a 6,000-year-old prehistoric village east of Jefferson City were unearthed by MoDOT in an archeological dig in late summer of 1999.

The site was discovered during preliminary work for several bridge replacement projects on Route 94 near Wainwright in Callaway County. It was named Callaway Farms after the property's owner.

MoDOT investigates historical sites, including buildings and bridges,

during preparation for construction projects. The Callaway Farms site is one of the largest discoveries in the United States of structures dating back this far.

There is no doubt this site was heavily occupied in the ancient past. After excavations were completed, the artifacts, maps of the pits and recovered food remains were analyzed to get a more complete picture of the lives of people who lived in the area 6,000 years ago.

The village, which consisted of 10 timber-framed huts, could have been a winter camp for 100 to 150 people. The area is about 150 yards long by 75 yards wide and was covered by three to four feet of earth prior to being discovered.

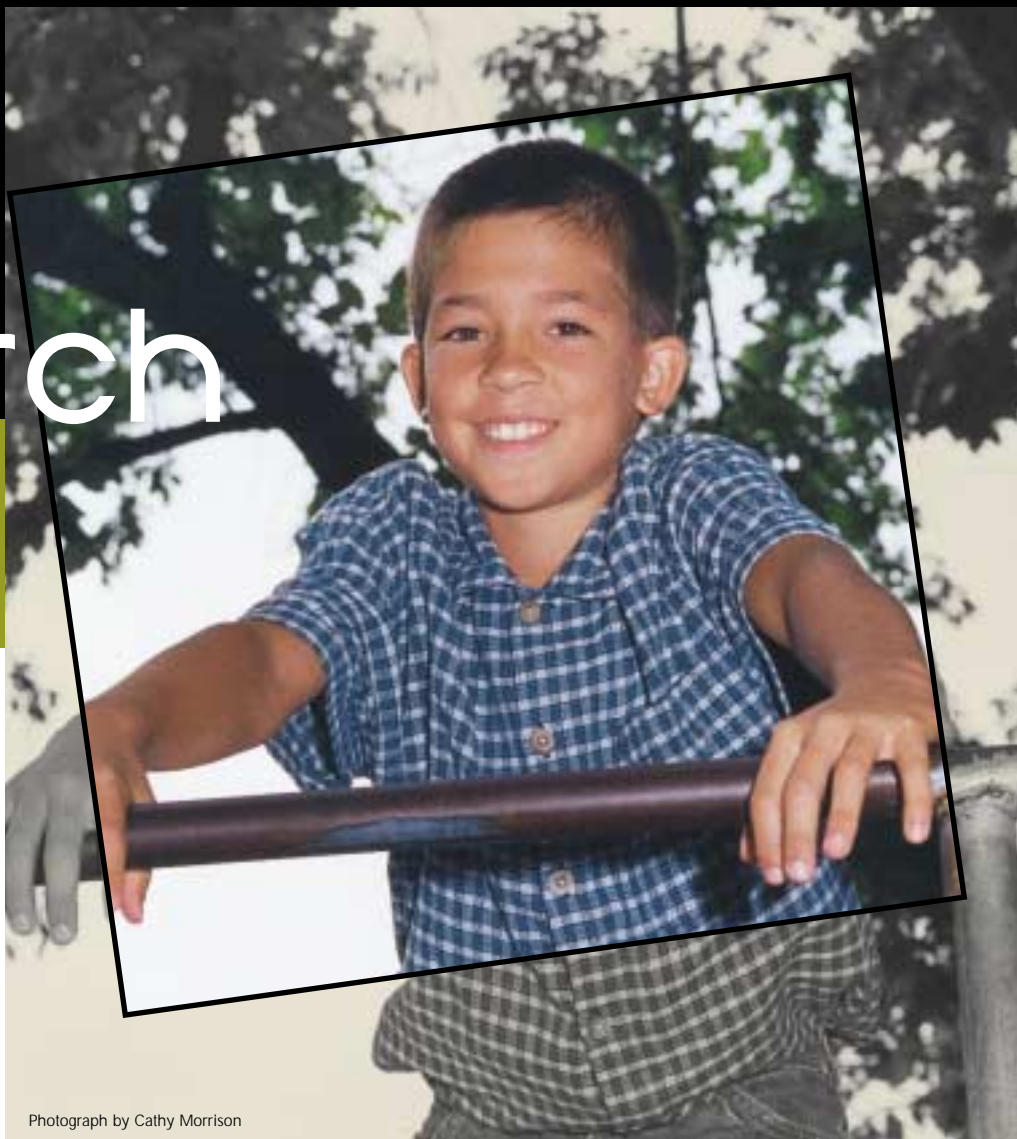
More than 4,000 visitors toured the site and heard presentations by MoDOT archeologists. The visitors were also able to watch archeologists at work recovering artifacts such as spear points, stone drills and scrapers.

"Safer, smoother, longer-lasting roadways.  
Clean, attractive roadsides. That's what  
Missourians expect, and that's what we're  
working on every day at MoDOT."

[www.modot.state.mo.us](http://www.modot.state.mo.us)  
1-888-ASK MODOT

# Research

Increasing traffic volumes means improvements must continually be made to pavements and bridges and also in the materials and methods used. Researching and developing new ideas and utilizing innovative technology helps MoDOT make the most of funds. Some of the year's projects include water-repellant pavement, light-emitting diode traffic signals, 3-D computer modeling, earthquake sensor equipment and road weather information sites.



Photograph by Cathy Morrison

## **NovaChip**

NovaChip is a paving process the department is testing in St. Joseph that may provide a longer-lasting surface that sheds water to reduce hydroplaning, skidding and road spray. The process results in a thinner surface layer, which is beneficial where overhead clearance and drainage problems may occur.

A special membrane called NovaBond is applied to prevent water leakage and provides a superior bond to the old asphalt or concrete surfaces. Then NovaChip is applied, which combines a surface seal with a hot mix level-paving surface. NovaChip can be used as preventive maintenance or as a limited surface rehabilitation treatment. It is beneficial in high-traffic areas because the process moves quickly in one pass.



## Light Emitting Diode Signals

MoDOT maintains nearly 2,000 signal lights across the state. Most use incandescent light bulbs similar to a standard light bulb. Through a partnership study between MoDOT, the Federal Highway Administration and the Dialight Corporation, the department has tested Light Emitting Diode signals at 41 locations in Jefferson City, at the intersection of Route 50/63 and Missouri Boulevard.

LED signals use small chips that emit light. Measuring just 1/100th of an inch long, they have greater energy efficiency and longer life than incandescent bulbs. They also have a lower life-cycle cost, require less maintenance, and provide increased signal intensity and improved motorist awareness. LED lights require



Photograph by Gary Reinhart

approximately 75 percent less energy for operation and are expected to last approximately seven years or more, compared to one year for an incandescent bulb. And, unlike an incandescent bulb signal, which is completely off when it burns out, the loss of an individual LED does not result in a total loss of the signal, which can mean fewer accidents.

## 3-D Modeling of Conditions for Bridge Foundations

Successful design of bridge foundations requires thorough understanding of the subsurface conditions at bridge sites.

MoDOT evaluated the benefits of using three-dimensional computer models to help develop an accurate understanding of subsurface conditions for bridge structures. Several three-dimensional computer models were developed for the site of the proposed Lexington Bridge over the Missouri River on Route 13.

The results show three-dimensional computer models of subsurface conditions can be extremely effective. This can lead to better identification of potential problems before construction begins and can result in alternative designs.

Photograph by Mike Wright





Photograph by Cathy Morrison

### **Seismic Research Equipment on Cape Girardeau Bridge**

The new Bill Emerson Memorial Bridge in Cape Girardeau will carry special earthquake research equipment. The equipment includes stress and strain gauges and ground-positioning system instruments to track movements on the bridge and surrounding land. The bridge is in the New Madrid Seismic Zone, an area for which there are few strong ground motion records available.

The new equipment will provide data to aid engineers in improving future seismic designs. Better design will reduce construction costs by enabling engineers to efficiently design bridges that can withstand earthquakes without being overbuilt. Additionally, it would provide more information to residents and businesses in the New Madrid Seismic Zone, increasing public safety and reducing construction costs.

research

### Road Weather Information Systems

MoDOT is partnering with Boone County Public Works to install weather-information systems at several locations in Boone County along Interstate 70 and Route 63. Pavement and subsurface sensors will collect atmospheric and ground information.

The equipment will help MoDOT and Boone County determine, from a remote location, what is occurring in the atmosphere and on the pavement. The information will be used to improve safety because maintenance crews can be deployed in a timely manner during winter snow removal and anti-icing efforts, providing a cost savings. Data from the sites can also be used to schedule repairs for a roadway and plan for changes that need to be addressed regarding traffic flow.

Similar equipment is also being used in St. Louis, Kansas City, St. Joseph, Hannibal, Odessa and Branson.

## Brighter Highway Stripes?

Just how bright is a highway stripe supposed to be? Are Missouri's stripes bright enough? A research program under way at MoDOT will answer these questions more precisely than ever before. The results will help keep highway stripes brighter and save money as well.

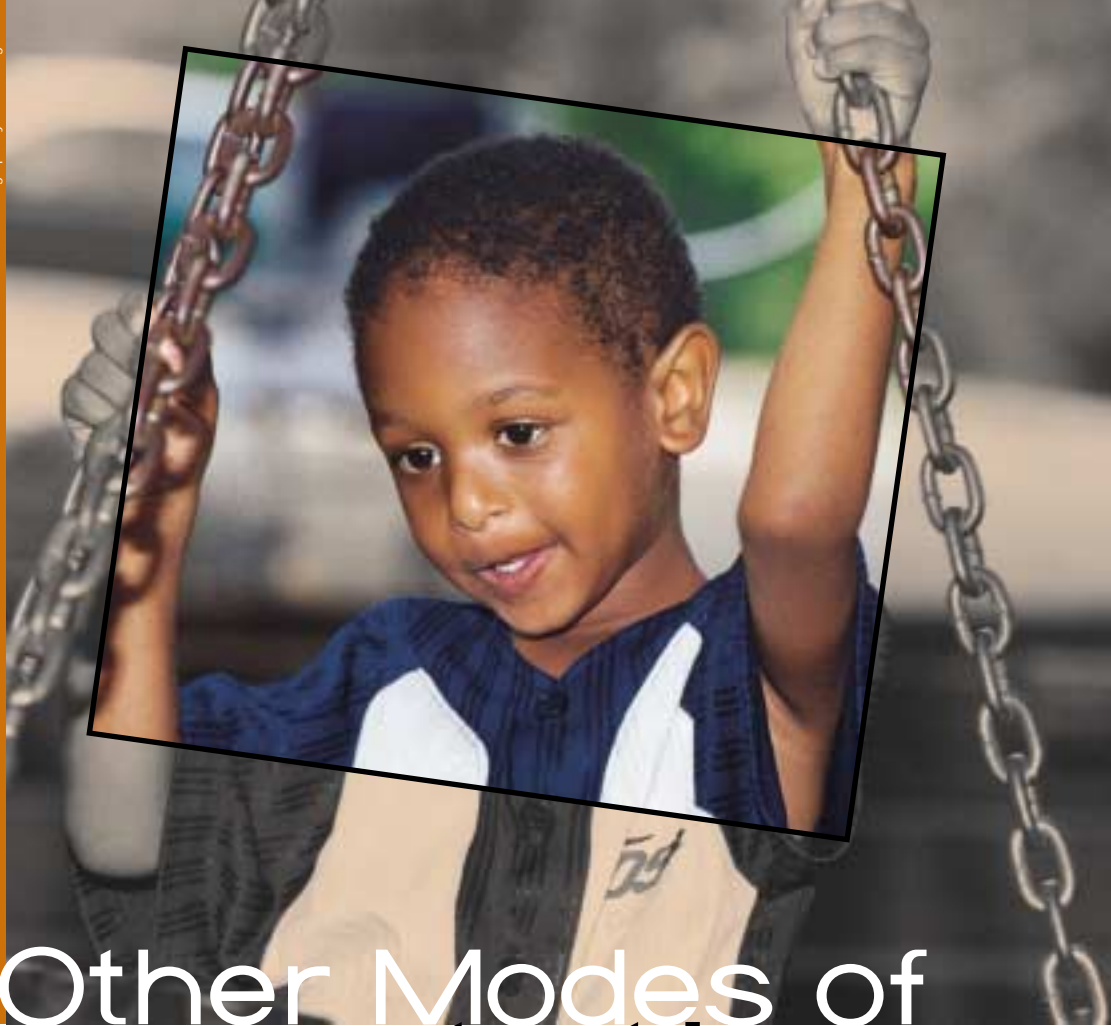
In southwest Missouri, the department is testing new techniques to measure the durability of pavement markings, as well as how well the stripes reflect light. Currently, highway stripes are judged by a simple visual inspection. Highway stripes are usually painted once a year on all roads, unless conditions warrant more frequent striping.

But by using new measurement methods, including laser readings and computer analysis, MoDOT engineers may be able to determine where stripes are holding up well and where they're wearing out quickly. These more exact measurements will also help the department comply with new federal guidelines requiring Missouri and other states to measure the amount of light reflected when vehicle headlights shine on highway stripes.

Using these measurements, striping schedules can be adjusted accordingly to make sure new stripes go where they're most needed. By striping these areas first, and conserving paint in lower-priority areas, this pilot program may save taxpayers money as well.

If the pilot program is successful, the program will be expanded statewide.





# Other Modes of Transportation

Millions rely on an extensive network of highways across Missouri to travel from place to place. But other forms of transportation play an important role in helping move people and goods throughout our state. MoDOT assists communities with planning for aviation, rail and waterways facilities, which provide a boost to the state's economy. In addition, MoDOT supports public transportation and bicycle and pedestrian accommodations, all of which offer alternative means of travel.

## Aviation

MoDOT administers funds from the Federal Aviation Trust Fund and the State Aviation Trust Fund. Federal money can be used for airport improvements at Missouri aviation facilities. State funds go toward airport maintenance, capital improvements, planning and publication of a state aeronautical chart.

In 1996, MoDOT provided \$2 million in federal funds through the State Block Grant Program to build a new airport in Bolivar. Since opening, the facility has experienced tremendous growth and exceeded 10-year activity projections.



# Bicycle and Pedestrian Needs Included in Project Planning

Bicycling and walking are great ways to get around, and MoDOT considers these options when transportation improvements are developed. The department recently issued guidelines for considering these transportation modes in project development.

There are many options for assisting bicyclists and pedestrians, including sidewalks, bicycle and pedestrian paths, mid-block pedestrian crossings, and designated bicycle lanes and shared lanes, which are wider than usual to accommodate both bicyclists and motorists.

Photograph by Cathy Morrison



Photograph by Cathy Morrison



Because of its expansion needs, several facility upgrades were completed this year at the Bolivar Municipal Airport. A state airport capital-improvement grant administered by MoDOT provided funding for construction of a new parallel taxiway that improves air-traffic flow and runway capacity, expansion of the aircraft parking apron and installation of an approach lighting system that improves all-weather use of the airport. A new connector taxiway, which serves a new public hangar development built by the city of Bolivar, was also constructed.

The improvement project was completed at a total cost of \$665,000, which included a \$530,000 MoDOT grant and \$135,000 from the city.

The Bolivar Municipal Airport is just one of five new airports MoDOT has helped build since 1990. Next year, construction on the North Central Missouri Regional Airport, which is jointly sponsored by Brookfield and Marceline, will be completed.

## OTHER MODES OF TRANSPORTATION



# Other Modes

## Passenger Rail

MoDOT is cooperating with eight other midwestern states to upgrade rail passenger services, including higher-speed trains between St. Louis and Kansas City.

The multistate effort is called the Midwest Regional Rail Initiative. The cost for improvements is an estimated \$313 million. Approximately 80 percent of the cost is anticipated to be covered by federal funds. MoDOT is seeking \$63 million in state funding that would cover the

remaining cost. Improvements for infrastructure, right-of-way acquisition and the purchase of modern passenger rail equipment are needed.

Several station improvement projects are expected to begin in 2001. MoDOT will provide limited matching funds for passenger station projects in Kansas City, Kirkwood, Sedalia and LaPlata.

[www.modot.state.mo.us](http://www.modot.state.mo.us)  
1-888-ASK MODOT



## Public Transit

Public transportation is a low-cost alternative means of travel for many Missourians. Through the use of state and federal funds, MoDOT assists with public transit programs, including public buses in both urban and rural communities, transportation for the elderly and disabled, and commuter light rail in the St. Louis area.

MoDOT participated with local communities in a study of transportation options in the high-growth Springfield/Branson corridor. The study concluded transportation problems could be solved with reliable transit service across the Springfield/Branson area and highway and bridge improvements. MoDOT also studied the potential for expansion of commuter rail service, which is currently supplied by Amtrak, in the Jefferson City-St. Louis and Jefferson City-Kansas City corridors.

## Waterways

Funding is provided by MoDOT for capital improvements to ports along the Mississippi and Missouri rivers through the waterways program. Inland ports are a vital part of Missouri's economy, moving cargo in and out of the state.

MoDOT has planned more improvements for Missouri's river ports after receiving more than \$6 million in funding from the state Legislature this year. Ports eligible for improvements with this funding include Pemiscot County, New Bourbon, Southeast Missouri, Howard-Cooper, Kansas City, St. Louis County, St. Louis, New Madrid and St. Joseph.

Photograph by Cathy Morrison



# Safe Travels



Photograph by Mike Wright

Safety is MoDOT's top priority. This commitment extends to everyone who uses our transportation system and to those who maintain it.

While the first week of April is National Work Zone Safety Awareness Week, MoDOT places an emphasis on safety every day of every week. MoDOT makes transportation in Missouri as safe as possible and we take that responsibility very seriously.

MoDOT employees are responsible to themselves, the public and those working around them to keep safety foremost in their thoughts. Safety starts with basic but important things such as wearing

seat belts, obeying speed limits, using proper protective equipment, and setting up work zones correctly.

Effective and visible work zones are MoDOT's best tools for protecting MoDOT staff and the public during construction and maintenance. MoDOT also ensures work areas set up by contractors and utility companies on state roads meet our high standards.

MoDOT supported legislation this year that would have helped make roads safer. One bill would have lowered the legal blood-alcohol content and increased penalties for driving while intoxicated. Other bills would have

established a primary seatbelt law and increased fines for drivers who speed in work zones. The bills were defeated.

Current legislation MoDOT supports will also increase the safety of Missouri's transportation system. One proposal would impose a \$250 fine for speeding in work zones. This fine will encourage motorists to slow down in work zones, protecting MoDOT and contractor employees and the traveling public. Another proposal would install cameras at intersections to monitor drivers who run red lights. This will encourage drivers to obey traffic signals and increase safety for other motorists. MoDOT will continue to emphasize safety, safe travels for motorists and a safe environment for MoDOT workers.

Photograph by Gary Reinhart



# I-70 Improvement Study

MoDOT is determining the best strategy to improve rural Interstate 70 between St. Louis and Kansas City. Kathy Harvey, project development liaison engineer in MoDOT's General Headquarters, says I-70 is old and needs work.

"I-70 was designed for a 20-year life span and was expected to carry 8,000 to 14,000 vehicles a day in rural areas by 1975. It now carries more than 31,000 to 58,000 vehicles a day in rural areas," Harvey says.

I-70 was intended to carry 10 percent truck traffic, but it carries 25 percent today.

Improvement strategies have narrowed to three options:

- widening the existing highway and adding lanes

- building a new parallel highway within a corridor up to five miles to the north or south of the existing highway
- building a toll road

Public comments on how best to improve the highway were obtained through 21 public meetings, a toll-free project phone line and a website. MoDOT staff is reviewing and analyzing a variety of factors that include public comment, environmental and socio economic issues, engineering and cultural resources, and will use these to determine an improvement strategy.

Any construction would depend on several factors such as funding, plans preparation and coordination with other projects.

Information about the I-70 study is available in many forms:

- an interactive website ([www.i70study.org](http://www.i70study.org))
- MoDOT's internet homepage ([www.modot.state.mo.us](http://www.modot.state.mo.us))
- a project hotline at 1-800-590-0066 or
- the department's customer service centers at 1-888-ASK MODOT (888-275-6636)



# Financials

## Financial Information

MoDOT is required by law to have financial data verified by an independent accounting and auditing firm. In concurrence with the State Office of Administration, MoDOT retained KPMG Peat Marwick, which annually reviews the department's financial statements for the year ending June 30.

The audit reviews the financial operations of the \$1.6 billion agency, which is responsible for Missouri transportation system.

MoDOT also complies with legislative accountability requirements by submitting a comprehensive report each year that contains financial statements, transporta-

tion project information and planning details. The report is available on the internet at [www.modot.state.mo.us](http://www.modot.state.mo.us). Copies may be obtained at MoDOT offices in Chesterfield, Hannibal, Jefferson City, Joplin, Kansas City, Macon, St. Joseph, Sikeston, Springfield and Willow Springs.

## Missouri Department of Transportation, FY2001 Road & Bridge Budget (in thousands of dollars)

	Actual 1999	2000 Budget	Updated 2001 Budget
<b>Income:</b>			
State Income	904,439	957,728	1,036,765
Federal Reimbursement	441,280	586,400	626,350
<b>Total Income</b>	<b>\$1,345,719</b>	<b>\$1,544,128</b>	<b>\$1,663,115</b>
<b>Expenditures:</b>			
<i>Administration</i>			
Personal Services	16,890	26,244	26,912
Fringe Benefits	7,818	11,154	13,414
Expense & Equipment	1,830	11,146	10,803
<b>Totals</b>	<b>\$26,538</b>	<b>\$48,544</b>	<b>\$51,129</b>
<i>Construction</i>			
Personal Services	90,945	79,719	82,130
Fringe Benefits	33,790	32,752	31,630
Expense & Equipment	76,172	52,014	53,138
Program & Contractor Payments	566,164	680,008	784,610
Right of Way Acquisition	101,716	97,800	70,000
<b>Totals</b>	<b>\$868,787</b>	<b>\$942,293</b>	<b>\$1,021,508</b>
<i>Maintenance</i>			
Personal Services	106,426	115,858	121,161
Fringe Benefits	45,012	48,561	49,816
Expense & Equipment	127,656	132,402	122,543
<b>Totals</b>	<b>\$279,094</b>	<b>\$296,821</b>	<b>\$293,520</b>
<i>Service Operations</i>			
Personal Services	0	14,730	16,451
Fringe Benefits	0	6,304	6,384
Expense & Equipment	0	64,079	50,780
<b>Totals</b>	<b>\$0</b>	<b>\$85,113</b>	<b>\$73,615</b>
Article X "Hancock" Refunds	\$ 6,929	\$ 24,600	\$0
Other State Agencies	\$166,840	\$183,500	\$176,378
<b>Total Expenditures</b>	<b>\$1,348,188</b>	<b>\$1,580,871</b>	<b>\$1,616,150</b>



Photograph by Cathy Morrison

# Missouri Highways and Transportation Commission

## **Missouri Highways and Transportation Commission** (left to right)

S. Lee Kling, St. Louis, Chairman; Edward D. Douglas, Chillicothe, Vice Chairman; William E. Gladden, Houston; W.L. (Barry) Orscheln, Moberly; Ollie W. Gates, Kansas City; Marjorie B. Schramm, Kirkwood

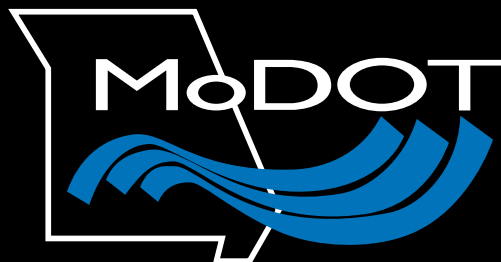
The bipartisan Missouri Highways and Transportation Commission is composed of six members and is the governing body of MoDOT. The governor, with the consent of the Senate, appoints the members of the commission to staggered terms of six years each. No more than three commissioners may be of the same political party.

The director, chief counsel and secretary are appointed by the commission.

All other appointments are made by the director, with the approval of the commission.

Mari Ann Winters, Secretary to the Commission  
Richard Tiemeyer, Chief Counsel

Henry Hungerbeeler, Director  
J.T. Yarnell, Chief Engineer  
J. Michael Golden, Chief Operating Officer



Missouri Department of Transportation

105 West Capitol Avenue  
P.O. Box 270  
Jefferson City, MO 65102  
1-888-ASK-MODOT (275-6636)  
[www.modot.state.mo.us](http://www.modot.state.mo.us)

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